

Notes on the genus *Aloeides* Hübner (Lepidoptera: Lycaenidae) with a description of a new species from the Transvaal

by

S. F. HENNING

and

G. A. HENNING

1 Harry Lawrence Street, Florida Park, Florida 1710

Reasons are given for considering *Aloeides taylori* Tite & Dickson as a junior subjective synonym of *Aloeides rileyi* Tite & Dickson and *Aloeides merces* **sp. nov.** is described from Wakkerstroom, Transvaal, South Africa.

The genus *Aloeides* Hübner was revised by Tite & Dickson (1968, 1973), but since then further collecting in southern Africa has led to the discovery of several new species (Tite & Dickson, 1976, 1977; Henning & Henning, 1982; Pringle, 1984) and the reassessment of the validity of others.

The terminology used in this paper follows that of Tite & Dickson (1968, 1973).

Aloeides rileyi Tite and Dickson, Figs 1, 2, 5, 6

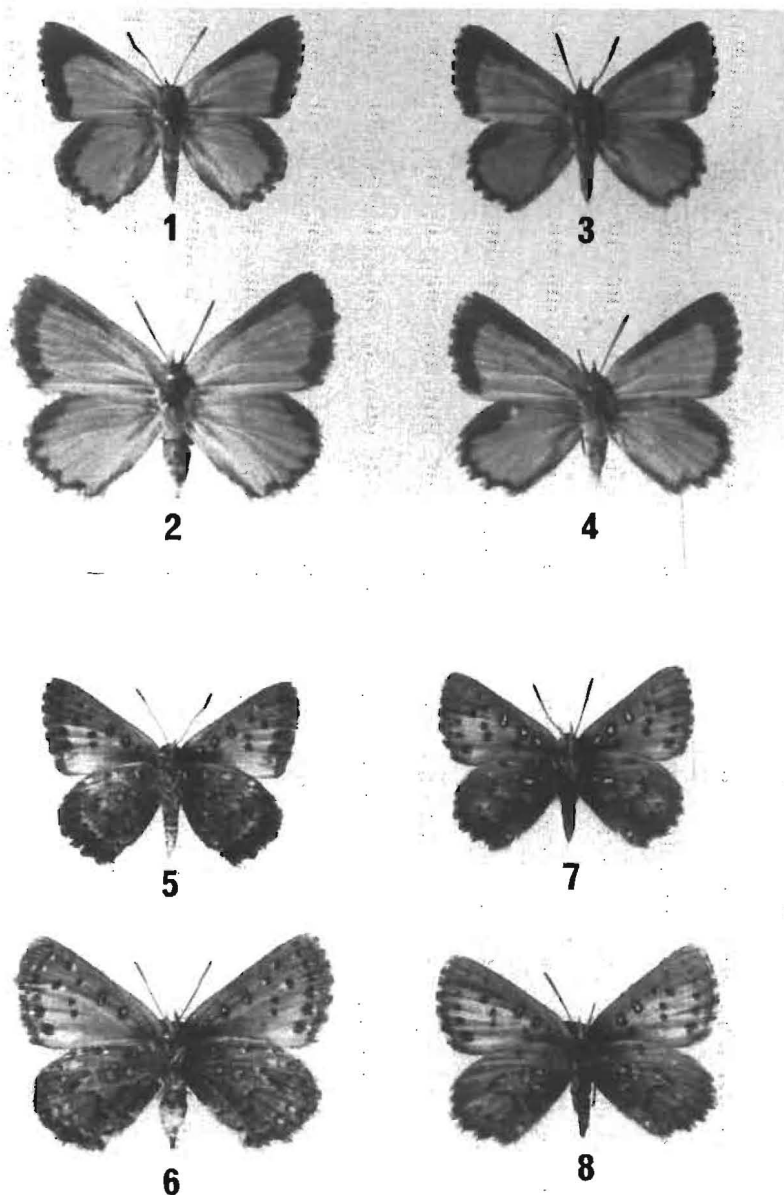
Aloeides rileyi Tite & Dickson, 1976

Aloeides taylori Tite & Dickson, 1976 **syn. nov.**

Aloeides rileyi and *A. taylori* were both described from single specimens in 1976 in the same paper. Since that time a number of specimens of both species have been collected from Golden Gate (the type locality of *A. taylori*) and Clarens in the Orange Free State and in Lesotho from Butha Buthe (the type locality of *A. rileyi*) in the north to as far south as Bushman's Pass.

The major diagnostic feature used by Tite & Dickson to separate *A. rileyi* and *A. taylori* was the extent of the upper side apical black patches. Research by the authors of this paper on a number of species of *Aloeides* has indicated that the extent of these apical patches is a highly variable feature and consequently not a reliable diagnostic feature. Our studies indicate that hind wing under side markings are a more important diagnostic character.

A careful comparison was made of the holotypes of both *A. rileyi* and *A. taylori* and the additional available material from the type localities and intervening areas. All diagnostic characters mentioned by Tite and Dickson (1976) were found to be highly



Figs 1-8. *Aloides rileyi* Tite & Dickson and *A. merces* **sp. nov.** Upper side. 1. *A. rileyi* ♂. 2. *A. rileyi* ♀. 3. *A. merces* ♂ holotype. 4. *A. merces* ♀ paratype. Under side. 5. *A. rileyi* ♂. 6. *A. rileyi* ♀. 7. *A. merces* ♂ holotype. 8. *A. merces* ♀ paratype (photo W. Morrison).

variable and no other reliable differences were found to separate the types of *A. rileyi* and *A. taylori* indicating that they represent only different examples of a highly variable species. The holotype of *A. rileyi*, which was described first in the publication, better represents the average facie of the species. The holotype of *A. taylori* represents an extremely dark variation of the species.

MALE. Fore wing lengths 12.5–17.0 mm. *Upper side.* Ground colour tawny-orange with distal black band of fore wing varying from 1.5 mm to 2 mm at vein 2; band-like apical patch may be narrow (holotype of *A. rileyi*) or widened to form a definitely triangular area (holotype of *A. taylori*) – most specimens ranged between these two extremes; inner edge of distal band variable but with most specimens having a smooth inner edge. Hind wing with apical patch narrow (holotype of *A. rileyi*) or larger and obtusely angled inwardly (holotype of *A. taylori*) and all variations between these extremes. Cilia white to pale fuscous and heavily chequered with black. *Under side.* Fore wing with spot in base of space 1 (holotype of *A. taylori*) or may be absent (holotype of *A. rileyi*) or present in varying sizes; darker specimens usually have a larger spot. Hind wing with a greyish-brown ground colour; basal and subbasal spots large; median series confluent and jagged; distal series irregular in size and often indistinct.

FEMALE. Fore wing lengths 17.4–18.3 mm. Similar to male but with wings more rounded; shows similar variation in markings.

MATERIAL EXAMINED. Holotype ♂: LESOTHO, Butha Buthe, 13.i.1940, K. M. Pennington (University Museum, Oxford); 2 ♂ same data as holotype (Transvaal Museum and Henning Collection); 1 ♂ Golden Gate, Orange Free State, 3.x.1954, K. M. Pennington (holotype of *A. taylori* in University Museum, Oxford); 1 ♀ same data but 20.i.1954; 2 ♂ same data but 28.i–3.ii.1971. Potgieter & Snyman (Transvaal Museum); 7 ♂ 1 ♀ same data but 16.xii.1983, G. A. Henning; 1 ♂ same data but 6.xii.1969, D. M. Kroon (Henning Collection); 2 ♂ same data but 6–7.xii.1969 (Kroon Collection); 2 ♂ 1 ♀ same data but 16.xii.1983, N. K. Owen-Johnston; 1 ♂ same data but 22.i.1984 (Owen-Johnston Collection); 5 ♂ Clarens, Orange Free State, 23.i.1977, D. A. Swanepoel; 1 ♂ same data but 12.ii.1977 (Transvaal Museum); 1 ♂ same data but 3.i.1977; 2 ♂ same data but 5.xii.1982, G. A. Henning (Henning Collection); 1 ♂ same data but 5.xii.1982, L. Beveridge; 1 ♂ Bushman's Pass, Lesotho, 29.i.1984, N. K. Owen-Johnston (Owen-Johnston Collection); 6 ♂ same data but 28.xii.1979–1.i.1980, P. J. Sharland; 3 ♂ same data but 29.i.1984, I. Bampton; 2 ♂ same data but G. A. Henning; 4 ♂ same data but 24.i.1984 (Henning Collection) – total 44 ♂ 3 ♀.

Aloeides merces sp. nov., Figs 3, 4, 7, 8

During the course of our studies this distinct new species of *Aloeides* was discovered by the authors and Dave and Esme Edge on the 4th November 1984, at Kas-trol Nek, near Wakkerstroom (27° 18' S, 30° 16' E), Transvaal. In general facies it comes closest to *A. rileyi* and is separated from that species as follows:

MALE. Close to *A. rileyi* but the outer margin of the fore wing is more rounded and on the upper side the apical patch of the hind wings is much larger. Under side ground colour much paler than *A. rileyi* and sandy brown in colour; outer marginal

area unmarked unlike *A. rileyi* which has black marginal spots; orange patch of fore wing is rounded apically and extends only as far as vein 4 in postdiscal area, in *A. rileyi* the orange patch is more pointed apically and extends as far as vein 5. Palpi similar to *A. rileyi* but much paler particularly on the distal segment which is pale greyish-brown compared to the dark brown of *A. rileyi*.

FEMALE. Closest to *A. rileyi* on the upper side but differs in having a much larger black apical patch on the hind wing. Under side as in the male and differs from the female of *A. rileyi* in a similar manner. Palpi similar to that of the male.

MALE HOLOTYPE. Fore wing length 13,2 mm; antenna-wing ratio 0,48. Palpi heavily covered with grey and pale brown scales, long silvery-grey ribbon-like scales on second segment. Distal segment half as long as second segment and pale greyish-brown in colour. *Wings: upper side.* Fore wing: tawny-orange, with black distal band and apical patch; black distal band of approximately equal width, tapering just slightly towards tornus. Cilia greyish-white, becoming black at ends of veins. Hind wing: tawny-orange with irregular black apical patch and a continuous narrow marginal band; anal fold ochreous. Cilia greyish-white, becoming black at ends of veins. *Under side.* Fore wing: tawny-orange, margined by a continuous ochreous-brown costal and distal marginal band. Three white-centred black spots in cell; a median series of five black spots, upper three bordered proximally with silvery-white, spot in area 4 being placed distad, that in 5 slightly basad. Submarginal black spots largest in area 1b, diminishing in size as they approach the apex. Cilia mainly black, becoming slightly paler interneurally. Hind wing: ochreous-brown with a pattern of black and silvery-white markings. Four basal spots, a round spot in centre of area 7, discoidal fascia broken up into separate spots, very irregular sinuate median series, and a series of submarginal lunules. Median and submarginal series proximally silvery-white and distally black. Cilia pale yellowish-brown, darker at ends of veins.

MALE PARATYPES. Fore wing lengths 12,5–13,3 mm; antenna-wing ratios 0,49–0,51, mean 0,50. Palpi similar to holotype. *Wings.* Both upper and under sides virtually identical to that of the holotype. *Genitalia:* similar to that of *A. rileyi*.

FEMALE PARATYPES. Fore wing lengths 14,5–15,0 mm; antenna-wing ratios both 0,48. Palpi similar to holotype but with distal segment proportionally slightly longer. *Wings: upper side.* Fore wing: tawny-orange, black distal band and apical patch as in holotype. Cilia greyish-white, becoming black at ends of veins. Hind wing: tawny-orange with irregular black apical patch and continuous narrow sinuate marginal band; anal fold ochreous and cilia greyish-white, becoming black at ends of veins. *Under side.* Similar to that of the holotype.

MATERIAL EXAMINED. Holotype ♂: SOUTH AFRICA, Wakkerstroom, Transvaal, 4.xi.1984, G. A. Henning. Paratypes: 1 ♂ same data as holotype; 1 ♀ same data but 11.xi.1984; 1 ♂ 1 ♀ same data but S. F. Henning; 2 ♂ same data but D. & E. Edge. The holotype is deposited in the Transvaal Museum, Pretoria; paratypes are in the collections of W. H., S. F., and G. A. Henning (Florida, Transvaal), D. & E. Edge (Bedfordview, Transvaal) and the Transvaal Museum.

DISTRIBUTION AND HABITS. This species occurs on the highest elevation of the

mountains near Wakkerstroom. They were found flying around rocky outcrops and grassy slopes near the summit. It exhibits the usual *Aloeides* habits, settling on rocks or on the ground. The males show hilltopping behaviour around the rocky outcrops on the summit of the mountain.

The name of this species means 'reward'.

The *Aloeides thyra* complex

The key to the species of the *Aloeides thyra* complex as given by Tite and Dickson (1968: 372) can be amended as follows to incorporate the above two species.

Additional couplets to the key to the species of the *Aloeides thyra* complex

- | | | |
|----|---|----------------------------------|
| 4 | Apex not acute | 4a |
| | Apex acute | 4b |
| 4a | Hind wing under side not well marked and not decorative | <i>A. merces</i> sp. nov. |
| | Hind wing under side well marked giving a decorative appearance | 5 |
| 4b | Hind wing under side with confluent jagged median series of marks on dark greyish-brown ground colour | <i>A. rileyi</i> |
| | Hind wing under side with separate sinuate median series of marks on brownish ground colour | 6 |

ACKNOWLEDGEMENTS

Our sincere thanks are due to the following persons who have so willingly assisted during this study: Mr W. H. Henning, Mrs M. J. U. Henning, Mr D. Edge, Mrs E. Edge, Dr D. M. Kroon, Mr N. K. Owen-Johnston and Mrs C. Addenbrooke.

REFERENCES

- HENNING, G. A. & HENNING, S. F. 1982. Descriptions of three new species of *Aloeides* Hübner (Lepidoptera: Lycaenidae) from the Transvaal, South Africa, and South West Africa (Namibia). *Journal of the Entomological Society of Southern Africa* **45** (2): 231–238.
- TITE, G. E. & DICKSON, C. G. C. 1968. The *Aloeides thyra* complex (Lepidoptera: Lycaenidae). *Bulletin of the British Museum (Natural History), Entomology* **21**: 367–388.
- 1973. The genus *Aloeides* and Allied Genera (Lepidoptera: Lycaenidae). *Bulletin of the British Museum (Natural History), Entomology* **29**: 225–280.
- 1976. Further Notes on species of the genus *Aloeides* (Lepidoptera: Lycaenidae). *The Entomologist's Record and Journal of Variation* **88**: 177–180.
- 1977. Further Notes on species of the Genus *Aloeides* (Lepidoptera: Lycaenidae). No. 2. *The Entomologist's Record and Journal of Variation* **89**: 209–212.
- PRINGLE, E. L. 1983. A new lycaenid butterfly from Lesotho of the genus *Aloeides* Hübner. *The Entomologist's Record and Journal of Variation* **95**: 173–174.

Accepted 9 January 1986